SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Revised: May 28, 2021

Product Information

SCAS

Catalog Number: 70037

Unit Size: 100 mg

Storage and Handling

Store desiccated at 4°C. Product is stable for at least 12 months from date of receipt when stored as recommended. Stock solutions may be prepared in water. Solutions can be stored at 4°C or below, for 6 months or longer.

Molecular Information: $C_{56}H_{40}Na_8O_{32}S_8$
Molecular Weight: 1665
Color and Form: Off-white solid
Solubility: Water
Product Description

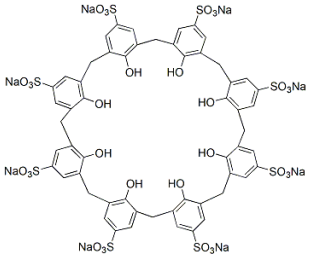

Figure 1. 4-sulfanato calix[8]arene, sodium salt (SCAS)

Nerve terminal probes are cationic styryl dyes used to follow synaptic activity at neuromuscular junctions or synapses. Fluorescence background staining from nonspecific absorption of the dyes to the outer leaflet of the membrane is a frequent problem when using nerve terminal dyes. Though the background can be reduced through repeated washing, the problem may still persist when using certain dyes with longer tails or more double bonds.

SCAS is a unique quencher developed by Biotium to reduce background fluorescence when using nerve terminal dyes such as SynaptoGreen™, SynaptoRed™, and the fixable AM dyes. SCAS dramatically lowers background fluorescence as soon as it is added to the preparation. Unlike the cyclodextrin ADVASEP7, which can be added to wash buffers to help remove excess nerve terminal dye, SCAS quenches background without the need for repeated wash steps.

References

1) J. Biol. Chem. 283(14), 9289(2008); 2) Dev. Cell 44(1), 56(2018);
3) J. Cell Sci. 127(1), 250(2014).

General Considerations for Use

- Typical working concentration of SCAS is 0.5 mM. To make a 100 mM stock solution in water dissolve 100 mg of SCAS in 600 uL dH_2O.
- SCAS can be used in the same buffer that is optimal for staining, for instance Tyrode solution for neurons or a suitable buffer like HBSS with calcium/magnesium for adherent cells.
- Incubating for 5 minutes with the SCAS solution will be sufficient for quenching in most applications, but optimal protocols for specific applications may need to be determined by the user. It is recommended to remove the SCAS solution before imaging.
- After quenching with SCAS the cells can be imaged, or if fixable dyes are used, samples can be fixed and subjected to subsequent immunofluorescence staining protocols.

Sample Protocol

The following is an example protocol for nerve terminal staining of cultured neurons on coverslips using fixable neve terminal dyes, followed by quenching with SCAS and immunofluorescence staining. Buffers other than Tyrode solution may be used. The addition of the sodium channel blocker tetrodotoxin (TTX, see Related Products) is optional; its purpose is to block action potentials and prevent synaptic vesicle release after staining.

1. Dilute the dye to the desired staining concentration in Tyrode solution. Place the coverslip with your cells in this solution at room temperature. Use enough solution to completely submerge the cells. Incubate for the desired length of time.
2. Transfer the coverslip to Tyrode + 0.5 uM tetrodotoxin solution for 1 minute at room temperature.
3. Transfer the coverslip to SCAS quencher solution in Tyrode + 0.5 uM TTX for 4 minutes at room temperature. The typical concentration of SCAS working solution is 0.5 mM (for example, 5 uL of 100 mM SCAS per mL solution).
4. Transfer the coverslip to fixation solution (4% formaldehyde, 4% sucrose, 1 uM TTX in PBS) for 20 minutes at room temperature.
5. Transfer the coverslip directly to pre-chilled 0.01% Triton X-100 in PBS for 12 minutes at 4°C.
6. Wash 3 x 1 minute with cold PBS.
7. Stain with primary antibody in 10% serum/PBS for 3 hours at 4°C. The concentration of the antibody should be double of what you would use for regular immunofluorescence staining.
8. Wash 3 x 1 minute with cold PBS.
9. Stain the preparation with secondary antibody at the concentration you would normally use for immunofluorescence staining in 2% serum/PBS for 40 minutes at 4°C.
10. Wash as in step 8.
11. Mount the coverslip in PBS and image.

Related Products

Catalog number	Product
70042	SynaptoGreen™ C1
70044	SynaptoGreen™ C2 (equivalent to FM®2-10)
70023	SynaptoGreen™ C3
70020	SynaptoGreen™ C4 (equivalent to FM®1-43)
70046	SynaptoGreen™ C5 (equivalent to FM®4-84)
70048	SynaptoGreen™ C18 (equivalent to FM®1-84)
70040	SynaptoRed™ C1
70021	SynaptoRed™ C2 (equivalent to FM®4-64)
70028	SynaptoRed™ C2M (equivalent to FM®5-95)
70024	AM1-43
70038	AM1-44
70036	AM2-10
70051	AM3-25
70025	AM4-64
70039	AM4-65
70050	AM4-66
70029	ADVASEP-7
80101	Sulforhodamine 101
70030	Nerve Terminal Staining Kit I 5 x 1 mg SynaptoGreen™ C4 and 250 mg ADVASEP-7
70031	Nerve Terminal Staining Kit II (A) 1 mg AM1-43 and 100 mg ADVASEP-7
70032	Nerve Terminal Staining Kit III 5 x 1 mg SynaptoGreen™ C4 and 100 mg Sulforhodamine 101
70034	Nerve Terminal Staining Kit V 5 x 1 mg SynaptoRed™ C2 and 250 mg ADVASEP-7
00060	Tetrodotoxin, citrate-free
00061	Tetrodotoxin, with citrate
00010	α-Bungarotoxin

Please visit our website at www.biotium.com for information on our life science research products, including monoclonal primary antibodies, fluorescent CF® dye secondary antibodies and other conjugates, antibody labeling kits, apoptosis reagents, fluorescent probes, and kits and accessories for cell biology research.